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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/668,387	09/23/2003	Zheng Tan	IP-024170	2460
1726 7590 08/07/2009 INTERNATIONAL PAPER COMPANY 6285 TRI-RIDGE BOULEVARD LOVELAND, OH 45140				
EXAMINER FORTUNA, JOSE A				
ART UNIT		PAPER NUMBER		
1791				
MAIL DATE		DELIVERY MODE		
08/07/2009		PAPER		

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary

Application No.

10/668,387

Applicant(s)

TAN ET AL.

Examiner

José A. Fortuna

Art Unit

1791

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 29 May 2009.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-4, 7-9, 20-34 and 36-38 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-4, 7-9, 20-34 and 36-38 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date _____
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date _____
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: _____

DETAILED ACTION

Allowable Subject Matter

1. The indicated allowability of claims 1-4, 7-9, 20-34 and 36-38 is withdrawn in view of the newly discovered reference(s) to Sajbel et al., US Patent No. 5,447,602 and further considerations of the previously cited reference. Rejections based on the newly cited reference(s) follow.

Information Disclosure Statement

2. The information disclosure statement filed November 20, 2008 fails to comply with the provisions of 37 CFR 1.97, 1.98 and MPEP § 609 because most or all of the cited references were cited in previous IDS by applicants or by the examiner in the previous PTO-892 Form . It has been placed in the application file, but the information referred to therein has not been considered as to the merits. Applicant is advised that the date of any re-submission of any item of information contained in this information disclosure statement or the submission of any missing element(s) will be the date of submission for purposes of determining compliance with the requirements based on the time of filing the statement, including all certification requirements for statements under 37 CFR 1.97(e). See MPEP § 609.05(a).

Claim Rejections - 35 USC § 112

3. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

4. Claims 1-4, 7-9, 20-34 and 36-38 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

In claims 1 and 34 the phrase “subjecting the pulp fibers to a refining...” renders the claims vague and indefinite since it is unclear if the referring fibers are the ones treated with the composition, i.e., refining the treated fibers, or the previously mentioned fibers, i.e., the refining is done before the peroxide treatment. If the former then it is suggested to clearly define the fibers which are being refined, e.g., subjecting the ...to a peroxide... to form a peroxide treated fibers... subjecting said/the peroxide treated fibers to refining...”

In claims 7 and 8, the phrase “said solution” lacks of antecedent basis.

Claim Rejections - 35 USC § 103

5. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

6. The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.
7. Claims 1-4, 7-9, 20-34 and 36-38 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kempf, US Patent No. 4,410,397 in view of Smook in “Handbook for Pulp & Paper Technologists,” 2nd Edition.

Kempf teaches a process of treating pulps with peroxide and metal-ion additives. The process teaches maintaining the pulp slurry at temperatures between 40 °C to 120 °C for 0.5 to 8 hrs, see abstract. In the abstract Kempf teaches that the peroxide is added from 0.1% to 10% which falls within the range claimed in the dependent claims and teaches

that metal-ion containing additive is added and the pH is controlled between 1 to 7, which also falls within the claimed range. Kempf teaches that the peroxide treatment not could only be used to delignify the pulp, but can be used after the pulp is bleached with other bleaching agents, see example 1. Kempf is silent with regard to the refining step after the peroxide treatment, however Smook teaches that it is well known to refine pulps after has been treated in the pulping process, bleached or unbleached, to develop their optimal papermaking properties with respect to the product being made, see page 194. Therefore, refining the peroxide treated fibers taught by Kempf would have been obvious to one of ordinary skill in the art in order to optimize its properties for papermaking.

Note that the independent claims do not include the amount of peroxide and metal ions used or if the metal ions are actually added, and therefore, the addition of the peroxide by itself would read on the claims since pulps always contain metals ions, such as Fe, Mg, Cu ions that cannot be completely removed even if desired.

Note that claim 33 is a product by process product and Kempf teaches a pulp which is the same or substantially similar than the resulting product. In the event any differences can be shown for the product -by-process claim 33 as opposed to the product taught by the reference Kempf such differences would have been obvious to one of ordinary skill in the art as routine modification of the product in the absence of a showing unexpected results, see *In re Thorpe*, 227 USPQ 964 (CAFC 1985).

As the afore mentioned claims are product by process claims, it is deemed that "[A]ny difference imparted by the product by process claims would have been obvious to one having ordinary skill in the art at the time the invention was made because where the

examiner has found a substantially similar product as in the applied prior art the burden of proof is shifted to the applicants to establish that their product is patentably distinct, ..." In re Brown, 173 U.S.P.Q. 685, and In re Fessmann, 180 U.S.P.Q. 324.

Further, "[P]rocess limitations are significant only to the extent that they distinguish the claimed product over the prior art product." In re Luck, 177 U.S.P.Q. 523 (1973).

8. Claims 1-4, 7-9, 20-34 and 36-38 are rejected under 35 U.S.C. 103(a) as being unpatentable over Sajbel et al., US Patent No. 5,447,602.

Sajbel et al. teach a process for repulping paper containing a wet strength agent by adding to the pulp a mixture of peroxide and a metal ion, see abstract. Sajbel et al. teach the amount of peroxide used falling within the claimed range, see column 2, lines 12-21, and the metal used which are within the claimed compounds, e.g., iron, copper, manganese, etc. Sajbel et al. teach that the process is conducted at temperature from 25 to 100 °C and pH between 3-13, both ranges covering the claimed ranges, see column 3, lines 7-19. Example 9 teaches the use of a mixture of peroxide and iron at pH of 7 for about 60 minutes and teaches that the iron is used as a salt, ferrous sulfate. Note that the repulped papers are which are treated are commonly made with softwood fibers or a mixture of softwood and hardwood fibers. Sajbel et al. is silent with regard to the refining of the repulped paper, however Smook teaches that it is well known to refine pulps after has been treated in the pulping process, bleached or unbleached, to develop their optimal papermaking properties with respect to the product being made, see page 194. Therefore,

reefing the peroxide treated fibers taught by Sajbel et al. would have been obvious to one of ordinary skill in the art in order to optimize its properties for papermaking.

Note that claim 33 is a product by process product and Sajbel et al. teach a pulp which is the same or substantially similar than the resulting product. In the event any differences can be shown for the product -by-process claim 33 as opposed to the product taught by the reference Sajbel et al. such differences would have been obvious to one of ordinary skill in the art as routine modification of the product in the absence of a showing unexpected results, see *In re Thorpe*, 227 USPQ 964 (CAFC 1985).

As the afore mentioned claims are product by process claims, it is deemed that "[A]ny difference imparted by the product by process claims would have been obvious to one having ordinary skill in the art at the time the invention was made because where the examiner has found a substantially similar product as in the applied prior art the burden of proof is shifted to the applicants to establish that their product is patentably distinct, ..." *In re Brown*, 173 U.S.P.Q. 685, and *In re Fessmann*, 180 U.S.P.Q. 324.

Further, "[P]rocess limitations are significant only to the extent that they distinguish the claimed product over the prior art product." *In re Luck*, 177 U.S.P.Q. 523 (1973).

Response to Arguments

9. Applicant's arguments with respect to claims 1-4, 7-9, 20-34 and 36-38 have been considered but are moot in view of the new ground(s) of rejection.

Conclusion

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure in the art of "Peroxide Treatment of Papermaking Pulps."

Any inquiry concerning this communication or earlier communications from the examiner should be directed to José A. Fortuna whose telephone number is 571-272-1188. The examiner can normally be reached on 9:30-6:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Steven P. Griffin can be reached on 571-272-1189. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/José A Fortuna/
Primary Examiner
Art Unit 1791

JAF